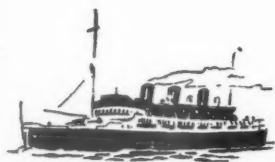




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# THE ARCHITECTS'



## JOURNAL

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JOURNAL AND THE ARCHITECTURAL ENGINEER  
IS PUBLISHED EVERY THURSDAY BY THE ARCHI-  
TECTURAL PRESS (PUBLISHERS OF THE ARCHITECTS'  
JOURNAL, THE ARCHITECTURAL REVIEW, SPECI-  
FICATION, AND WHO'S WHO IN ARCHITECTURE)  
FROM 45 THE AVENUE, CHEAM, SURREY

THURSDAY, JANUARY 22, 1942.

NUMBER 2452: VOLUME 95

### PRINCIPAL CONTENTS

THE ANNUAL SUBSCRIPTION RATES ARE AS FOLLOWS :  
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BY POST TO CANADA..... £1 3 10  
BY POST ELSEWHERE ABROAD..... £1 8 6  
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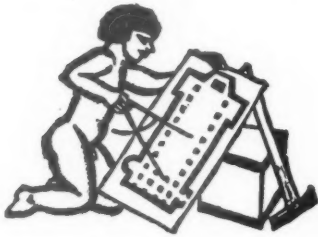
The Editor will be glad to receive MS. articles  
and also illustrations of current architecture in this  
country and abroad with a view to publication.  
Though every care will be taken, the Editor cannot  
hold himself responsible for material sent him.

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The fact that goods made of raw materials in short supply  
owing to war conditions are advertised in this JOURNAL  
should not be taken as an indication that they are necessarily  
available for export.

Owing to the paper shortage the JOURNAL, in common with all  
other papers, is now only supplied to newsagents on a "firm  
order" basis. This means that newsagents are now unable to  
supply the JOURNAL except to a client's definite order.

★ In common with every other periodical and newspaper in the country, this JOURNAL is rationed to a small proportion of its peace-time requirements of paper. This means that it is no longer a free agent printing as many pages as it thinks fit and selling to as many readers as wish to buy it. Instead a balance has to be struck between circulation and number of pages. A batch of new readers may mean that a page has to be struck off, and conversely a page added may mean that a number of readers have to go short of their copy. Thus in everyone's interest, including the reader's, it is important that the utmost economy of paper should be practised, and unless a reader is a subscriber he cannot be sure of getting a copy of the JOURNAL. We are sorry for this but it is a necessity imposed by the war on all newspapers. The subscription is £1 3s. 10d. per annum.



### from AN ARCHITECT'S *Commonplace Book*

"'Lord bless you, sir!' cried Mark, 'what's the use? Some architects are clever at making foundations, and some architects are clever at building on 'em when they're made. But it'll all come right in the end, sir; it'll all come right!'"

Charles Dickens in *Martin Chuzzlewit*.

## NEWS

The country's need of waste paper is as urgent and pressing as ever. It is wanted for making nearly every kind of munitions, and on these the safety of every one of us depends. Have YOU done everything you possibly can to hunt out all YOUR waste paper and made sure that it is handed over for repulping? Have YOU gone through your plan chest, your file, your cupboards, your drawers, your collection of old drawings, specifications, bills of quantities, correspondence, etc.? If not, DO IT NOW. And if you have religiously gone through the accumulation of years, are you going steadily on day after day, and week after week saving every available scrap? That is what the country wants from each one of us.

### OBITUARY

We regret to record the death, on Saturday last, of Mr. J. A. Gotch, at his home, Weekley Rise, Kettering. Mr. Gotch was a Past President of the Royal Institute of British Architects. He was also a partner in the firm of Gotch, Saunders and Surridge of Kettering, and it is from Mr. Surridge's *Architect's Commonplace Book* that quotations are published in the JOURNAL each week. Mr. Gotch was 91 years of age.

### WILL

Mr. Frank Pick, left £36,433 (net personalty £27,909).

### M.O.W.B.

Extracts from a speech made by Mr. George Hicks, M.P., Parliamentary Secretary, M.O.W.B., at a luncheon of the Town and Country Planning Association, on "The Part of the Ministry of Works in Post War Reconstruction," last week:—

We, at the Ministry of Works, are working for an age when the questions in what kind of town, in what kind of street and in what kind of houses the nation shall find its home is settled less by blind haphazard processes, and more by what our people collectively think is right.

To bring about this change there must be a great deal of collective action and control. For some time after the war our resources for building are bound to fall short of demand and so, if the Ministry is asked to continue some measure of control, its object would be to see that building resources are fairly and equally available to all, and to each according to his need.

At the present moment the Ministry of Works is strengthening building technique by making it simpler, quicker and more efficient in its application to wartime needs. We have done a good deal of standardisation—a word which covers at least three different things. First, the standard specification of materials which is a question of agreeing a physical or chemical description that will give the material certain fixed properties on which the user can rely. This work, the work of the British Standards Institution, goes on in peace time and wartime and is the basis of sane design and economic building. Then there is simplification, the reduction of sizes, shapes and varieties to a few. And finally there is standardised planning of such buildings as canteens and hostels.

There is an enormous discrepancy between what is known and what is done in building, as we see it in our streets and in our houses. Ask yourself what is to be found in any ordinary building—be it a State-aided council house, a good speculative builder's house, a block of flats or an office block or a factory—of all the thinking and experimenting in building matters that has been going on in workshops and drawing offices and laboratories in all the great countries of the world. I think the answer will be disappointing. A mass of priceless knowledge lies scattered in many places. We are making it our business to see that it is all collected and prepared in convenient form which can be digested by the people who do the work of building. Our intention is to stimulate the various interests most vitally concerned to do the work, and we will co-ordinate and assist.

The coming of peace will bring tremendous difficulties—and, a tremendous opportunity for the building industry to take a forward step. For years many of us have felt that if only the great machine of modern industry could be stopped all sorts of valuable improvements might be made. In a sense the war has stopped it. We are going over the great machine of peacetime building to see what can be done to improve it.

It used to be an old gag that Governments could never afford to think about the future because the future has no votes. If that was ever true it is not true to-day. In this, the greatest and hardest of all our wars, our vision of the future is the one thing that sustains us.



## Sir Edwin Lutyens, o.m.

Among New Year honours for 1942 was an O.M. for 73 year old Sir Edwin Lutyens, President of the Royal Academy and Fellow of the Royal Institute of British Architects since 1906. It is the first time the O.M. has ever been conferred on an architect. This

honour, more worth winning than most, crowns the career of an architect made outstanding by a personal genius which is acknowledged even by those who differ from its recipient. (Photo : Walter Stoneman).

### PROPAGANDA FOR TOWN PLANNING

Mr. Tom Harrisson dealt a number of shrewd blows at what might be called the Penang mentality among town planners at a recent meeting of the Housing Centre. He said that for the last two years, since war began in fact, interest in public affairs had been steadily increasing, in contrast to the three years immediately before which had been characterized by steadily intensifying apathy under Baldwin, Chamberlain & Co.

Social-mindedness was being encouraged by several factors, such as lower income tax, and the feeling that everyone now is doing work that matters combined with frequent cases of industrial disorganization which were unfortunately seldom explained. But he pointed out that to accept this as a guarantee of a better world in future was greatly to mistake the situation. Many people were so appalled by the complexity of the problems that their reactions were quite different from what would-be planners might expect, and could be summed up

in the one word hopelessness. Mass observation showed that among the things people hoped for most were equality of opportunity, better housing, together with a jumble of other things which might be lumped together as town planning, but were certainly not consciously thought of as such, socialism, abolition of unemployment and security. What they expected was very different—less class distinction, a rather aimless increase of State control, possibly even Fascism. Disappointment after the last war had created a kind of neurosis

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★ Sir Edwin Lutyens is the first architect to receive the O.M. page 70

★ Architects must educate the people they hope to plan for or reconcile themselves to the existing state of affairs page 71

★ A village of "bubble houses" financed by the American Government page 74

★ Prices: Seventh Wartime List page 81

that might be very difficult to shake off. The idea that planning is possible has not yet percolated to the majority of people, who do not know what the word implies or the names of the Ministers supposed to be responsible for it. About 12 per cent. of the people interrogated had heard of Reith's appointment, about 3 per cent. of Greenwood's. The popular belief is that the Government has no planning policy. Mr. Harrison pointed out that the existing situation was exceedingly dangerous. The vague goodwill that exists and gives rise to so much complacency could very easily be swept aside by organized vested interests when the time came to agitate for a return to the *status quo*. No vigorous resistance could be expected from a dispirited public ignorant of the wide issues involved. Even if detailed plans were ready they would rouse no enthusiasm if they were prepared by specialists out of touch with public opinion: unless they were in tune with popular prejudice they would not be immediately acceptable. Good propaganda directed towards the right people was essential now; good propaganda should have the double effect of educating the audience and also giving rise to discussion which would react on the would-be planners and educate them in their turn. Propaganda was not just a one-way process as so many people were inclined to think. Unfortunately most of the propaganda at present was completely useless because planners were contented, like the Church of England, to preach only to the converted. The people who needed attention were people who could talk for half a day about anything connected with their own house but could not frame a single sentence about planning—and many of them left school before the school-leaving age was raised to fourteen. He was certain that the kind of exhibition touring the country at present meant little to them and equally certain that it meant absolutely nothing to him.

(Comments to Astragal next week.)

#### LECTURES AT THE A.A.

Following is a list of lectures to be delivered at the Architectural Association School of Architecture at the Mount House, Monken Hadley Common, Barnet, during the next three months:—

Jan. 28.—Miss Jane B. Drew, "Changing Technique in Town Planning."

Feb. 11.—Anthony M. Chitty, "Planning of Aerodrome Factories."

Feb. 25.—G. Grenfell Baines, "Hostels."

Mar. 11.—J. L. Holt, "Glass Making."

## PROPAGANDA AND TOWN PLANNING

THE chief point emerging from Mr. Tom Harrison's\* recent talk, reported in the news, at the Housing Centre is that architects who are not actively engaged in propaganda are not doing their job. But propaganda means to Mr. Harrison something rather different from what it means to most of the British public, used to regarding the word in the light of developments in Nazi Germany. Good propaganda, according to him, is not merely an endless repetition of catchwords and slogans directed at a passive public but should be a two-way process designed to explain the specialists' ideas to the public and to find out in turn what the 'public' thinks of them—and wants. It is in fact a method of harnessing and focusing a half-formed public opinion.

The average citizen now discusses subjects that never entered his head before and is full of vague hopes. But mass observation shows that these hopes are not supported by conviction; that a kind of neurosis exists engendered by the course of events after the last war which leads five out of every six people to say "it can't happen here" about longed-for reforms with as much conviction as they say it about invasion. Among architects the form this neurosis takes is not quite so simple. They are apparently full of fight but unfortunately they fight the wrong thing—they are inclined to hunt snarks. Time and energy are wasted for instance ranting against vested interests, though, in fact, their flourishing condition is merely a symptom of public apathy. That is the real enemy. Nearly all the powers necessary to secure well-laid-out towns have been in existence for years—but like the vote they are not exercised. Architects must educate the people they hope to plan for, the people they hope to have as patrons, or reconcile themselves to the existing state of affairs. A frontal attack on vested interests is a complete waste of time. In England administrators as well as legislators are dependent on public opinion and if the only clear and positive statement of that comes from people chiefly interested in money values, then they will get the upper hand, and no amount of legislation will make any difference.

The public Mr. Harrison talks of is not the public of the Town and Country Planning Association, of the B.B.C. or the R.I.B.A. exhibition, a small but faithful band of converts—but the great unwashed public, temporarily expelled by Hitler from congested central areas—they are the potential clients of the would-be planner and he must learn to work with them. They are also the most likely dupes of a status quo movement because they are more uncomfortable and therefore more impatient than anybody else.

Two possible courses Mr. Harrison suggested lie open to architects. The first is to find out what people want and design propaganda that will have an immediate appeal: alter-

\* Director of Mass Observation.

natively to work out more scientifically arrangements that may be expected to give good results and then educate the people concerned to appreciate how their own lives could be improved by putting them into practice.

Both mean finding out what people want and this means adjusting propaganda to suit people who are used to thinking in concrete terms—who can talk for a whole morning about a gas cooker but cannot frame a single sentence on a subject like decentralization.



*The Architects' Journal*

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## NOTES & TOPICS

### NEW PLAN FOR LIVERPOOL

"Mobility lies at the root of town planning and roads are the structural elements of a town plan," Alderman A. Ernest Shennan, J.P., M.A., F.R.I.B.A., told the Merseyside Civic Society when he spoke to them, in his private capacity, on Liverpool's new plan. He backed this assertion by stating that 75 per cent. of Liverpool's dock traffic is carried by road.

The new plan of Liverpool not yet completed or published, yet is, judging from his description, inspired by this belief. An inner ring road will link most of the arterial roads connecting Liverpool with the hinterland, and also the three main line stations.\* This should provide quick and easy cross-town travel and avoid congestion at the centre. Below the ring road will be space for an underground should one be needed at some future date.

\*Lime Street and Central Stations are to be moved forward. Exchange Station will be connected to the inner ring road by a wide new branch thoroughfare.

Space within the ring is to be reserved for a civic centre, and this high purpose emphasized by the exclusion of trams. However, the Mersey Tunnel entrance—land gateway to Liverpool on the southern side—lies near the centre of this semi-circle, so a fair amount of motor traffic will disturb its serenity, which is a pity.

Civic centres are one of the few excuses we have left for ceremonial architecture and monumental planning. Anyone who has tried to appreciate Barry by taking a walk round Parliament Square will realize that motor cars are there to stop that sort of thing.

As the world is to-day the only way to admire the nation's monuments in peace is to reach over to the bookshelf, and take down a volume of old prints; or wait until a king's coronation makes it necessary for police to hold the ring

for a day or two—which happens about once in a generation.

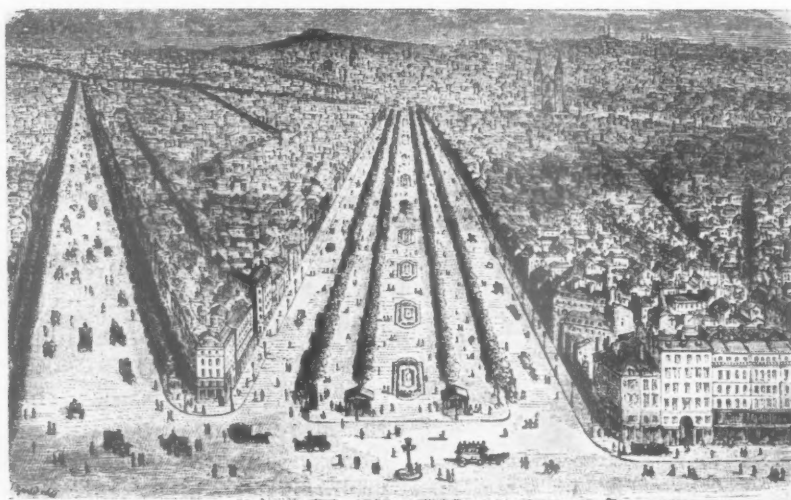
One hopes that in the Liverpool plan, so finely conceived, the space between the roads will be replanned as boldly as the roads themselves—for that, after all, is where the people of the town live and work (a fact which the royal architects of Paris were content to overlook). They die, of course, in the streets as a rule.

Street architecture of the present type, which limits John Citizen's choice to slum or frontage, seems as horrible to me as other survivals once thought convenient; for instance, the heat-conserving back-to-back house. Bigger and better roads will improve matters very little if the corollary is bigger and better shops along the pavement with deeper and darker discomfort behind.

### BUBBLE HOUSES

American Architect Wallace Neff, designer of Pickfair, also of houses for Joan Bennett, Louis B. Mayer and King Vidor, is again in the news, this time for spraying a concrete house about a balloon—one way of solving the shuttering problem that our directorate for economy of design haven't thought about yet.

Bubble houses are a serious proposition in America, though their appearance is not altogether so.



"Boulevard Richard-Lenoir, 1861-63. Planned by Haussmann to cover an old canal. Behind the regular and endless street fronts a tremendous disorder is crammed as though in a wardrobe. (From Space, Time and Architecture, by Sigfried Giedion).

Neff's experiments have been financed by Government funds this time, and not by Hollywood socialites. As a result of them, an odd little colony of Walt Disney mushroom houses has sprung up under the trees on Horseshoe Hill, Fairfax county, near Washington, and is attracting more visitors from miles around.

Method of construction is to lay a 3 in. gravel base and on top of that 3 in. of concrete with anchor hooks round the outer edge. Later a rubber and canvas balloon is made fast to these with ropes and iron bars, and air is pumped in at 1½ lb. pressure by the same compressor used to apply concrete. Inflation time, five minutes.



Model of a one-dome "bubble house," made from a balloon and referred to in Astragal. Such houses could be made quickly and in large numbers to shelter war-evacuated populations of American cities. Other illustrations of balloon houses and notes on their construction are on page 74. All the pictures are reproduced from *Life*.

Shuttering in position, the next stage is to lay door and window frames against this pneumatic form, and build the walls which hold them in position by spraying first concrete (gunite) to a thickness of 1 in. then a layer of cellulose and asbestos insulation, then two more inches of concrete. Time required to complete this process, 7½ hours. When the shell is set the balloon is deflated and used again.

Houses can be almost any unconventional shape—hemispherical, barrel-shaped or domed. They are termite proof, fire proof and bomb-splinter proof, and use almost no critical materials; even nails are unnecessary. The large house illustrated, which has a 14 ft. by 28 ft. livingroom, two bedrooms 14 ft. by 10 ft., kitchen 9 ft. by 10 ft., bathroom 8 ft. by 8 ft., and nine closets,

whatever that means, cost about £700 to construct (in U.S.A.).

The possibility of applying the idea to other problems is being explored. The U.S.A. army is considering whether tent shelters of concrete could not be built as cheaply as a canvas tent. The same method might also be applied to hangars, barracks, bomb-proof shelters and concrete barges. How different an army camp would look in this kind of fancy dress.

#### SCIENCE IN WAR

Discussion at the recent Conference of the Association of Scientific Workers was wholly on science in war. It was no less imaginative for that day dreaming about setting things right only in the future. Dr. FitzMaurice's paper—opening the session on building—illustrated this point.

He described how work in connection with war-time building had compelled the research institutions to work on new subjects and with a new approach, and described some interesting results of this return to first principles: evolution of stressed skin construction, for instance, and the close collaboration between architect and engineer that had been made necessary by industrial A.R.P. work. Here division walls, designed and spaced by engineers on theoretical grounds, have later to be planned together with the layout of the whole industrial process, by the architect in charge of the job, but without impairing their structural efficiency.

Professor Haldane made it his job to point out that the official attitude to wartime building has not always been rational, and he referred to the history of the shelter programme and the shortage of cement at a crucial time in the programme. In connection with A.R.P. he said unofficial research must go on, as did the work of the A.R.P. Co-ordinating Committee—who now were concentrating mainly on rest centres, welfare work, and organisational problems. A scientific government would have no room, he said, for men like Amery ("that pedlar

of purgatives") or Sir A. Rowse ("an old gentleman from India").

The efforts of designers and technicians to apply building research and get on with war-time jobs efficiently were described by Miss Blanco White, who outlined problems now being discussed by the A.A.S.T.A. and by the M.O.W.B. The slow emergence of effective central control, for instance, overlapping of work by Services and Ministries, and complicated hierarchies of controlling officials on and off the sites.

The A.A.S.T.A. is suggesting office and site committees to spread new instructions and information, and to give everyone on the job an idea of its general importance—a method which the L.C.C. used effectively to reorganize its technical staff when the reservation age was suddenly raised, and which was also found useful on a large hostels scheme when everyone concerned was at sixes and sevens, due to continually altered instructions; in the M.O.W.B. itself, labour-saving draftsmanship might be introduced as a first step.

Mr. Arup read a paper on the design of concrete work from a contractor's point of view. He advocated simplicity and standardisation, but not the rigidly equal sizes which are most people's idea of a standard plan. Concrete should be used as a plastic and adaptable material. Formwork, though greatly influencing the form of the building, should be reasonably adjustable in all directions. He pointed out that expensive formwork, designed for quick and cheap handling, is feasible when the ratio of labour formwork cost is high, and so is the best solution when, as with shelters, there is much repetition.

The fullest-yet collection of models of war-time building was on show. The B.R.S. centreless arch and Dr. Darcy's protected spine construction were there, also Mr. Arup's shelter-hostel and Mr. Gibson's shelter-house.

#### ASTRAGAL

\*Mr. Arup's shelter-hostel-housing construction is designed on these principles.



# B A L L O O N      H O U S E S



**1** The ring-shaped foundation of the balloon house is 6 in. below the frost line. An 8 in. concrete floor is laid over an 8 in. gravel base. Wood flooring is laid last, after the wiring and pipes are installed.



**2** The balloon is made fast to the circular foundation with ropes and iron bars. Air is pumped into the balloon at 1 1/2 lb. pressure by the same compressor later used to apply the concrete. The inflation time is 5 minutes.



**3** A 900 dollar canvas balloon with rubber coating inside and out is used as "pneumatic form." Door and window frames are placed flat against the balloon and sealed into place as the concrete goes on.



**4** The first cover of concrete is 1 in. thick and becomes the inner wall of the house. Then comes layer of insulation (asbestos and cellulose) followed by 2 in. outer wall of concrete. The process takes 7 1/2 hours.

A village of "bubble houses," designed by the American architect, Wallace Neff, built under the trees on Horseshoe Hill, Fairfax County, near Washington. Although very unconventional in appearance, these houses are taken seriously, and their construction is being financed by the American Government. The American Army is considering using the same method of construction as a substitute for canvas tents, and also for hangars, barracks, bomb-proof shelters and concrete barges.



A double balloon house with connecting foyer, containing a living room 14 ft. by 23 ft., brick fireplace and bookcases, two bedrooms each 14 ft. by 10 ft., kitchen 9 ft. by 10 ft., bathroom 8 ft. by 8 ft., and nine closets. The house uses gas for heating and the bath is fitted with a shower.



# Post War Reconstruction of LIVERPOOL

*The following extracts are taken from an Address delivered recently by Alderman A. Ernest Shennan, J.P., M.A., F.R.I.B.A., to the Merseyside Civic Centre on the post-war reconstruction of Liverpool, and relate mainly to the City Engineer's proposals for the replanning of the City's transport system:*

I would like to make it quite clear at the outset, to prevent any misunderstanding, that I am speaking in my private capacity as an interested citizen, and not as a political leader, or in my professional capacity as an architect and surveyor.

There has been a great deal of interest displayed of late in the subject of town planning and reconstruction, and one has heard and read a lot about magnificent vistas, processional ways and beautiful buildings.

I agree that all these form part of the picture, but it is only a part, and I must emphasize the other more important components of planning, without due attention to which we proceed at our peril. . . .

In plain terms, under the artificial conditions of life that prevail to-day, mobility lies at the root of town planning, and roads are the structural elements of the town plan. . . .

Whether we like it or not we must see conditions as they really are and plan for what has become known as the 'transport age'. . . .

In Liverpool the statutory planning authority is the City Council, and since 1909 the Health Committee has had the responsibility of promoting town planning schemes. . . .

On planning matters the Health Committee has been advised by successive City Engineers from Mr. John A. Brodie to Mr. Herbert Hamer, the present holder of the office, who is a Town Planning expert with experience gained in many parts of the country. . . . The City Architect and Director of Housing advises the Health Committee on elevations to new buildings, and his valuable assistance will be available when rebuilding commences after the War. . . .

## *The Central Area*

Uppermost in our minds, of course, is the damaged central area, and before considering any new plan let us first examine the defects in the present layout. The theoretical shape of coastal towns is normally a semi-circle, and Liverpool approximates closely to this shape in practice. It possesses an exceptional feature, however, in its world-famed line of docks, which stretch for seven miles along the diameter of this semi-circle, and when we consider that a very great proportion of the import and export trade of the whole country passes

through these docks, and that 75 per cent. of it is carried by road transport, it is not surprising that we are faced with a traffic problem of great magnitude. The inadequacy of our present Dock Road to cope with the traffic has become so acute that the reorganization of traffic facilities in the port area has become a matter of great urgency.

The semi-circular form of the city, coupled with the lack of provision for gyratory traffic, has led to the usual characteristic encountered in coastal towns, where the centre of the semi-circle, in this case the Pier Head, becomes the terminus of the public transport system, and we are all sadly aware of the congestion which results, in the Dale Street and Church Street arterials for example. The running of trams into the centre of the city contributes greatly to this unsatisfactory state of affairs.

Of the three railway termini, Lime Street and Central Stations are well placed in relation to the existing street plan, but it has long been realized that the isolation of Exchange Station from the shopping centre of the city is a defect which will have to be remedied one day.

At the present time the absence of any direct connection between this station and the main thoroughfares results in the shoppers from the populous residential districts to the north of Liverpool, who arrive in the city at this point, being compelled to traverse a maze of unattractive streets before reaching their objective. . . .

Any mention of major defects in the city plan would be incomplete without a reference to the present unsatisfactory treatment of the Pier Head, where the majestic note struck by the three large buildings which flank the river front is considerably reduced for the want of an adequate setting. . . .

It is not a problem which can be put aside until peace returns. That will be too late if we are to make proper use of the opportunities afforded to us by the damage caused by enemy action. Once reconstruction takes place, and it is taking place now in the case of premises essential to the war effort, the new buildings which arise will determine the plan of the city for many years to come, and a policy for re-development is therefore essential now.

The Central Government is in full accord with us in this opinion and has made a very practical contribution in the enactment of Section 7 of the War Damage Act. Before compensation is paid in respect of buildings damaged by enemy action the War Damage Commission will need to know what the town planning authority has to say about how the recipient proposes to spend it, and if his proposals would not be in the interests of good planning he will have to alter them or forgo his right to compensation. The reconstruction of Liverpool will owe a lot to that section and to the new planning legislation which will most certainly come in the near future. . . .

We must be prepared, of course, to regard the plan for the redevelopment of the Central Area as representing a general policy only, and to be capable of considerable adjustment in detail during its fulfilment. With that important proviso in mind I now propose to refer to a few of the more salient proposals. . . .

## *The Port Area*

*The first of these is the Port Area.* The main problem concerns the North Docks, and here we have a far-reaching proposal to put forward whereby the Dock Road, north of its junction with King Edward Street, would virtually become a private service road on a combined Dock and Railway estate, which would be an extension of the existing Dock Estate eastwards to Derby Road and Great Howard Street. These two roads, which already carry an exceptionally heavy load of traffic, would be converted into a wide artery capable of carrying all the north and south-bound through traffic along the line of the North Docks, thereby relieving the Dock Road and making it capable of providing adequate inter-dock communication, which is its natural function.

The traffic problem of the Port Area is accentuated by the presence of the overhead railway, which, with its stanchions and heavy buttresses and the limited clearance between the underside of the structure and the roadway beneath, hampers the provision of any efficient connection between the docks themselves and the warehouses to the east of them.

As evidenced by the steady decline in traffic using this railway it appears to have served its useful purpose and in common with many overhead railways in other parts of the world it should, therefore, be taken down and replaced by a more mobile system of passenger transport.

These proposals will increase enormously the efficiency of handling traffic through the Port, and so stimulate the very life-blood of Liverpool. . . .

## *An Inner Ring Road*

"Now I wish to refer to a major item in the new plan. Probably no single

planning proposal could confer such great benefit to the heart of Liverpool as the scheme for an Inner Ring Road, if carried to its logical conclusion. . . .

The most satisfactory way of providing such a road in our case appears to be to adopt a long-term policy of bold improvement of existing streets. The route proposed follows the lines of Chapel Street, Tithebarn Street and Great Crosshall Street, thence by Hunter Street to cross London Road into Commutation Row. It then follows Lime Street to the proposed redeveloped area at Central Station, continuing down Church Street, Lord Street and James Street to the Strand, better known by its former name of The Goree, where it completes the circle to Chapel Street. The devastation in Lord Street and the dilapidated condition of the Goree warehouses make it practicable to carry out portions of this route as soon as post-war reconstruction commences, and we should bear in mind that as each successive link is constructed we shall derive a certain benefit from it, until finally the whole scheme is achieved and the principles of gyratory traffic put into full operation.

It will be observed that this route connects all three railway termini and serves the shopping centres of Lord Street and Church Street, in addition to diverting through traffic from the Civic Centre, while providing ready access to it.

Tramcars should be entirely excluded from the area encircled by this road. Travelling inwards by the various radial routes, they would turn into the ring road and circulate round the heart of the city, serving it to within a few minutes walk of any point but leaving it unencumbered.

The benefits derived from such a scheme would not be limited to the relief of traffic congestion, great as that would be, but the road, planned on spacious lines, would form a belt around the centre of the city and so provide badly-needed open space, while in the event of an underground railway being eventually required to link the stations its construction underneath this road would remove many difficulties which would otherwise arise.

*The site chosen for the Ring Road gives Exchange Station an added importance and assists us considerably in formulating our next proposal, which is the provision of a direct connection between the station and the Lord Street - Church Street shopping centre.* This is achieved by an extensive widening of Moorfields on the west side, and a continuation of this road through the poor property which lies between Dale Street and Lord Street. A fine wide thoroughfare would thus be created, commencing at a great traffic circus on the Ring Road, at the junction with Whitechapel, and terminating at the entrance to Exchange Station. Such a road would probably develop

into an excellent shopping street itself, in addition to fulfilling its primary function, and it should be noted that the carrying out of the Moorfields section is already simplified by war damage.

*Considering the other two termini, Lime Street and Central Stations are well placed in relation to the heart of the city, and are conveniently near to each other. . . .*

Both stations are termini for long-distance and suburban traffic, but steam operation makes it impossible to deal with a volume of local passengers in any way comparable with the peak loads successfully carried in and out of Exchange by the electric services. Electrification of the suburban lines into Lime Street and Central would result in a great expansion of traffic, and we must therefore provide in our plan for the extra accommodation which this would entail.

Central Station is severely confined laterally by the converging lines of Renshaw Street and Bold Street, and here a bold solution of the problem is recommended which involves certain expansion towards Renshaw Street to give additional width, together with the closing of Ranelagh Street and the extension of the station to Clayton Square. . . .

The lateral expansion of Lime Street Station is rendered possible by the redundancy of Skelthorne Street, brought about by the redevelopment of the area to the south, to which I will refer later.

The replanning and co-ordination of the two stations brings them both on to the inner ring road and makes them virtually neighbours, one on each side of a great traffic circus at the junction of Lime Street and Elliott Street, where one of the most important focal points in the city is planned.

There is an opportunity here for a great piece of civic design, and I would like to point out that the opportunity is heightened by the demolition brought about in this area by enemy action.

#### *The Civic Centre*

No doubt you have been expectantly awaiting my remarks on what will be the focal point of the new plan—the Civic Centre. I have already referred to the heritage we possess in the stately buildings which overlook St. John's Garden on the north and east sides, and which form the first glimpse of Liverpool as we enter it via the Queensway Tunnel. It is an impressive sight and gives us a very good idea of the effect we are aiming at in building up from this nucleus a Civic Centre worthy of Liverpool's greatness.

In contrast to the north side of St. John's Garden, the south side is occupied by small, out-of-date property which will inevitably become obsolete in the not-distant future, and the same can generally be said of the Kingsway frontages.

The proposals provide for the reservation of the St. John's Lane frontage for Civic Buildings, to balance the Museum and the Art Gallery and to complete the framing of the stately beauty of St. George's Hall, while on the western side, buildings connected with the administration of the city should be sited.

The heart of the Civic Centre is the tunnel entrance, which is appropriately accentuated, and the complete remodelling of St. John's Garden which Professor Adshead once described as 'so utterly bad that its very existence seems to call for the production of something better,' gives a setting to the architectural façades which surround it. . . .

Another point which must be given very careful consideration is the treatment of the area near the Town Hall. . . . It is a dignified building, well placed axially with Castle Street, to which it forms an admirable terminal feature, and our scheme provides for the widening of this street to enable it to fulfil its function of the processional approach. Provision is also made for the junction with Dale Street to be opened out in front of the Town Hall, thereby providing an adequate setting and forming a square to accommodate the crowds of people which congregate on state occasions. . . . We must not lose sight of the necessity for attaining beauty and dignity in other important parts of the city. The *Pier Head* is a case in point.

It is at this point that the Atlantic passenger gets his first close-up of the city when he sets foot on English soil, and it is here that the thousands of ferry passengers who cross the Mersey day by day converge on arrival from the Cheshire side of the river. . . .

Present proposals involve taking full advantage of the space between Princes Dock to the north and Canning Dock to the south to give a setting to the river front worthy of the approach to Liverpool by sea, which is the source of her prosperity. The majestic note struck by the three large Pier Head buildings is amplified by the addition of another building, which might appropriately accommodate a new Custom House, between the Liver and the Princes Dock, with suitable flanking buildings to the north and south to give a composite design.

The scheme provides for the remodelling of the area enclosed by these as a formal open space, and the exclusion of trams west of the Inner Ring Road, thus creating a rest garden from which the ever-changing river scene, so beloved of Liverpool people, could be enjoyed. . . .

Complementary to these is a general rectification of the existing street plan, involving the closure of some streets and the widening of others, together with the provision of new links where necessary.



Above: The waiting room  
Below: The entrance vestibule

## X-RAY DEPARTMENT, SOUTHAMPTON

DESIGNED BY DONALD A. GOLDFINCH

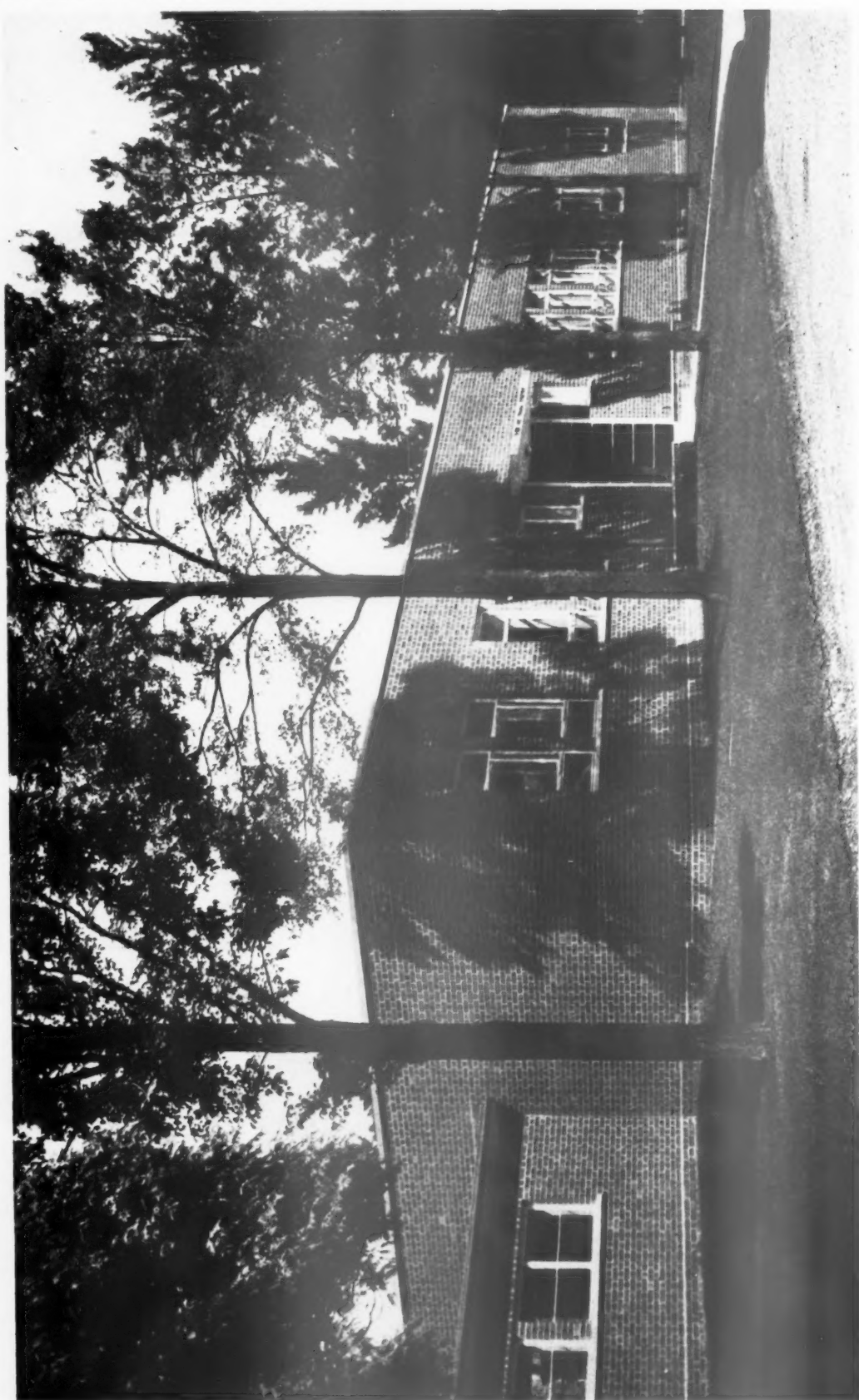


**GENERAL**—The new addition to the Borough General Hospital provides a complete department with X-ray and actinotherapy units on a site to the north-east of the existing hospital corridor opposite Portswood Ward block. The elevations have been designed with ample window space providing maximum light and ventilation. The surrounding garden lay-out has been kept in mind and flower boxes are introduced flanking the out-patients' entrance.

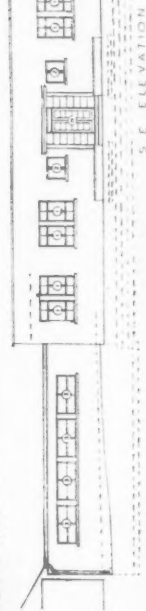
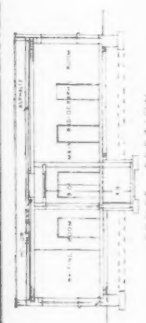
**PLAN**—Access from the hospital is by means of a corridor opening off the existing corridor opposite Portswood Ward, while the out-patients' entrance is from the service road opposite the Nurses' Home annexe. Patients from either approach gain access to



# X-RAY DEPARTMENT, SOUTHAMPTON



Above: The entrance front of the new building. Facing page: left top, the dark room (dry bench); left bottom, the plaster room; centre, detail of the main entrance (out-patients' entrance); right, the radiant heat and massage room



the waiting room with seating for thirty, and lavatory accommodation. The second unit is a unit intended for the equipped with developer unit, by means of a light lock and is essential that there should be no table, and is of very special design, maximum efficiency. The second unit is a unit intended for the equipped with developer unit, risk of shock either to the patient incorporating a rotating anode unit.

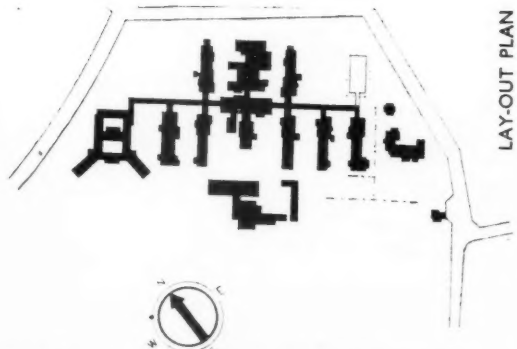
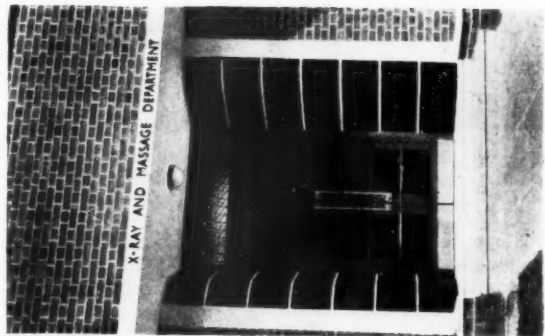
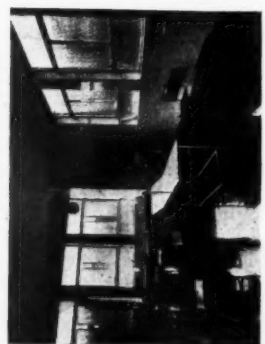
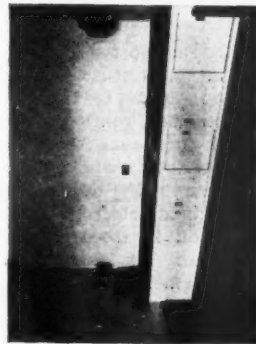
the waiting room with seating for thirty, and lavatory accommodation for both sexes. The waiting room chairs are of tubular design with canvas seats and backs, 50 per cent. being orange and 50 per cent. dark green in colour, these colours corresponding to the colours of the patients' treatment record cards for X-ray or actinotherapy respectively. This system enables the Sister to see at a glance the proportion of patients awaiting either treatment.

**EQUIPMENT**—The diagnostic equipment of the main radiographic and screening room is of the very latest type, incorporating a high tension generator having an output of 500 milliamperes at 100,000 volts. This is one of the highest power generators made, and with this power available the equipment is suitable for all types of X-ray examination, no matter how heavy the patient. When using high tension currents it is

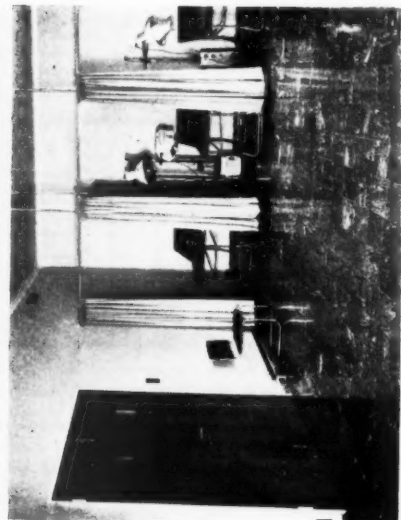
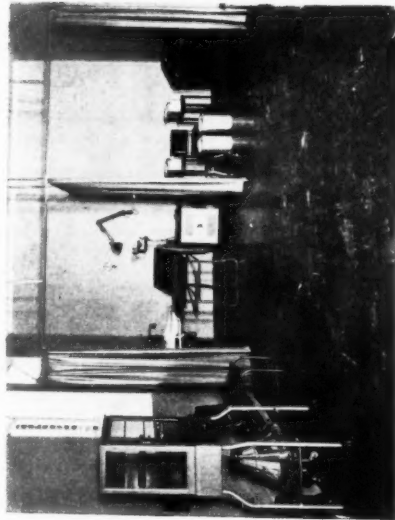
essential that there should be no risk of shock either to the patient or the operator, and this new equipment is 100 per cent. shock-proof. This safety is achieved by the use of specially constructed shock-proof high tension cables, which connect the high tension generator, housed in a separate machine room, to the accessory equipment in the main X-ray room by way of high tension cable ducts on the roof of the department. The accessory equipment consists of a special X-ray table which can be used in the vertical or horizontal position, or at any intermediate position. The changing of position is effected by an electrical motor drive, and the change can be effected, if desired, whilst the patient is on the table. Two X-ray tubes are used, one of which is located below the table, and is used for visual examination and the making of X-ray films; the second is located above the

table, and is of very special design, incorporating a rotating anode which permits the use of the highest power for high speed radiography (the making of an X-ray film). When using these very high voltages it is essential that the operator should have complete control, and the control switch table provided with the equipment is so designed that the operator can select any voltage and milliamperage with precision. It is important in X-ray work to be able to reproduce any given set of conditions at any time in order that a particular examination may be duplicated, and this facility is available in the new department. In addition to this high-powered unit, there are two smaller units, one of which is designed entirely for dental X-ray examination. This unit is used in conjunction with a dental chair, which enables all forms of dental X-ray examinations to be made with the greatest degree of comfort to the patient and with

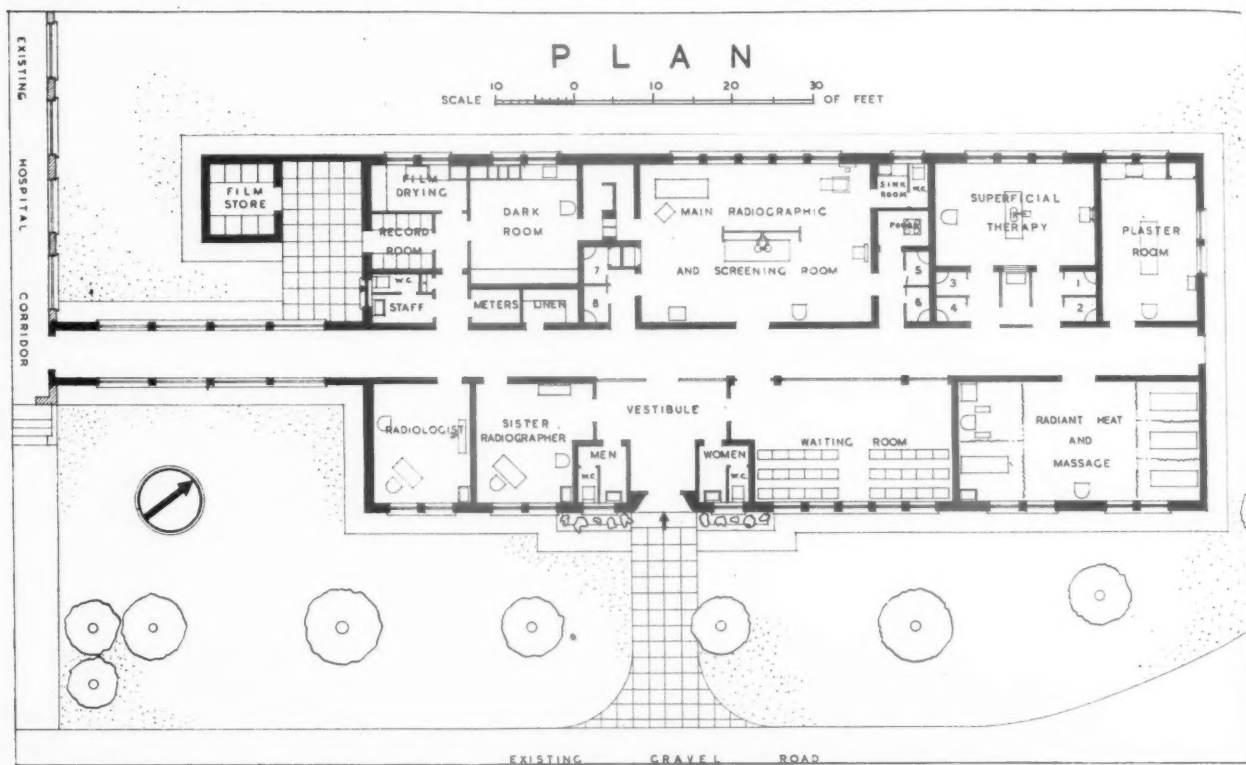
maximum efficiency. The second unit is a unit intended for the examination of the smaller parts of the body, for example, fractures in limbs and other similar X-ray examinations. This unit, being mobile, will also be available for X-ray examinations in the wards or operating theatres should this be necessary. A small wash-up room, available for the preparation of barium meals, and W.C., opens off the main radiographic and screening room. The dark room adjoins the film drying room, radiographic and screening room and a fireproof film store open-



LAY-OUT PLAN



## X-RAY DEPARTMENT, SOUTHAMPTON



Below: The entrance front from the service road; right, the dark room



ing off an open court is also provided.

**CONSTRUCTION**—The roof, which has been designed as a future first floor, is of fire-resisting hollow concrete construction. The walls of the corridors, changing cubicles and dark room have a special cold glaze finish which has many advantages, those of the lavatories and plaster room are lined with vitrolite, while elsewhere the walls are plastered and finished in flat enamel. Floors, generally, are in rigid rubber tiles, having an asbestos cement core, those of the X-ray rooms, sister-radiographer's office and radiologist's consulting room are strip boarded in white American oak, and the lavatories, film drying

room and dark room are floored in encaustic tiles. Electrically operated extract fans ensure efficient ventilation by means of a duct over the central service corridor, while the building is heated by thermostatically controlled electric tubular heaters fixed in front of the low level fresh air inlets. The colour schemes throughout form an

appropriate setting for modern therapeutic treatment. The new department has been designed as a unit, the equipment and furniture being considered as part of the whole by the architect, and is in accordance with the latest principles of hospital practice and the recommendations of the British X-ray and Radium Protection Committee.

**D E S I G N E D   B Y   D O N A L D   A .   G O L D F I N C H**





# P R I C E S

## SEVENTH WARTIME LIST

### EXPLANATORY NOTES

Few important changes have occurred since the last quarterly issue and prices generally can be considered fairly stable. Rates of Wages remain unchanged, and are as follows:—

#### LONDON DISTRICT

Within 12 miles radius .. ..  
From 12-15 „ „ .. ..

#### Craftsmen.

2s. 0d.  
1s. 11½d.

#### Labourers.

1s. 6¾d.  
1s. 6½d.

#### GRADE CLASSIFICATIONS

	A	A <sup>1</sup>	A <sup>2</sup>	A <sup>3</sup>	B	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	C
Craftsmen ..	1s. 10½d.	1s. 10d.	1s. 9½d.	1s. 9d.	1s. 8½d.	1s. 8d.	1s. 7½d.	1s. 7d.	1s. 6½d.
Labourers ..	1s. 5¾d.	1s. 5½d.	1s. 5d.	1s. 4½d.	1s. 4¼d.	1s. 3¾d.	1s. 3½d.	1s. 3d.	1s. 2½d.

F.S.I.

## CURRENT MARKET PRICES OF MATERIALS

BY DAVIS AND BELFIELD, Chartered Quantity Surveyors

Prices vary according to quality and the quantity ordered. Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit for the General Contractor.

### CONCRETOR

#### Cements

† All delivered in paper bags (20 to the ton) free and non-returnable.  
\* Paper bags charged at 7/- extra per ton non-returnable; jute sacks charged at 1/9 each and credited on return at 1/6.

	6 Tons and over	In 80-ton freights F.A.S. Safe Wharf in River Thames, London Area.
*Portland .. ..	per ton 49/6	47/-
*"417" Ultra rapid hardening .. ..	per ton 69/6	—
*Rapid hardening .. ..	per ton 55/6	53/-
*Water repellent .. ..	per ton 79/6	—
Atlas White (1 barrel 376 lbs.) .. ..	per barrel —	6 ton upwards

*Colorcrete rapid hardening, buff and red .. ..	per ton	89/6
*Colorcrete rapid hardening khaki .. ..	per ton	89/6
†Colorcrete rapid hardening dark .. ..	per ton 114/6 (4 ton lots)	—
†Colorcrete non-rapid hardening .. ..	per ton from 175/- to 399/-	—
†Snowcrete .. ..	per ton 205/-	—
*Ciment Fondu, delivered Central London area .. ..	1-9 cwt. 15/3	10-19 cwt. 14/9
		1 ton and upwards 12/9

#### Aggregate and Sands (Full Loads)

2" Unscreened ballast .. ..	per yard cube	9/10
¾" (Down) Washed, crushed and graded shingle .. ..	per yard cube	10/4
¾" (Down) Ditto .. ..	per yard cube	11/4
2" Broken brick .. ..	per yard cube	12/6
¾" Ditto .. ..	per yard cube	14/-
Washed pan breeze .. ..	per yard cube	9/6
Coke breeze 1" to dust .. ..	per yard cube	—
¾" Sharp washed sand .. ..	per yard cube	13/9
White Silver Sand for white cement (one ton lots) .. ..	per ton	—

(For Sands for Bricklaying and Plastering see respective trades)

#### Pavings

Brick hardcore .. ..	per yard cube	5/3
Concrete ditto .. ..	per yard cube	—
Clean furnace clinker and boiler ashes .. ..	per yard cube	4/6
Coarse gravel for paths .. ..	per yard cube	12/-
Fine ditto .. ..	per yard cube	15/6
Clean granite chippings .. ..	per ton	29/9

### CONCRETOR—(continued)

#### Pavings—continued

Red quarry tiles, 6" × 6" × ¾"	...	per yard super	7/2
Ditto 6" × 6" × ¾"	...	per yard super	6/-
Buff ditto 6" × 6" × ¾"	...	per yard super	7/10
Ditto 6" × 6" × ¾"	...	per yard super	6/7
Hard red paving bricks, 2"	...	per 1,000	235/-
Ditto 1½"	...	per 1,000	190/-

#### Reinforcement

Home trade maximum basis price for mild steel rods, ½" diameter and upwards, ex mills delivered to station or siding ... .. per ton £16 19 6

Extras for:—

½" and ¾" diameter ... ..	per ton	10/-
¾" diameter ... ..	per ton	15/-
1" diameter ... ..	per ton	20/-
1½" diameter ... ..	per ton	30/-
2" diameter ... ..	per ton	40/-
2½" diameter ... ..	per ton	60/-
Lengths of 40 ft. to 45 ft. ... ..	per ton	10/-
Lengths of 45 ft. to 50 ft. ... ..	per ton	15/-

#### Sundries

Retarding liquid, in 5-gallon drums (for exposing aggregate) .. ..	per gallon	21/-	Ex Warehouse, Southwark Bridge. Drums chargeable and credited, if returned.
Ditto (for obtaining a bond) .. ..	per gallon	13/1½	

### BRICKLAYER

#### Common Bricks

Rough stocks .. ..	per 1,000	69/6
Third stocks .. ..	per 1,000	67/-
Mild stocks .. ..	per 1,000	74/6
Sand limes .. ..	per 1,000	67/6
†Phorpres pressed Flettons .. ..	per 1,000	51/9
†Phorpres keyed Flettons .. ..	per 1,000	53/9
Blue Staffordshire wirecuts .. ..	per 1,000	230/-
†Lingfield engineering wirecuts .. ..	per 1,000	80/-
Firebricks, best Stourbridge 2½" .. ..	per 1,000	—
Firebricks, best Stourbridge 3" .. ..	per 1,000	—

#### Facing and Engineering Bricks

Sand Limes, No. 1 .. ..	per 1,000	95/-
Sand Limes, No. 2 .. ..	per 1,000	80/-
†Phorpres rustic Flettons .. ..	per 1,000	71/9
† At King's Cross. For delivery in W.C. district add 6/6 per 1,000.		
† Price ex works, delivery extra.		

**BRICKLAYER—(continued)***Facing and Engineering Bricks—continued*

Midhurst Whites	... ..	per 1,000	110/-
Hard stocks, firsts	... ..	per 1,000	100/-
Hard stocks, seconds	... ..	per 1,000	93/-
Sand-faced, hand-made reds	... ..	per 1,000 from	150/-
Sand-faced, machine-made reds	... ..	per 1,000 from	110/-
Red rubbers (9½-in.)	... ..	per 1,000	—
Uxbridge Flints (white)	... ..	per 1,000	80/-
Uxbridge Flints (creams, light greys, etc.)	... ..	per 1,000	from 110/-
Dunbricks (concrete), multi reds, ex works	... ..	per 1,000	95/-
Dunbricks (concrete), multi lavender, buffs and golden brown, ex works	... ..	per 1,000	95/-
†Southwater engineering No. 1 (first quality red pressed)	... ..	per 1,000	125/-
†Southwater engineering No. 2 (second quality red pressed)	... ..	per 1,000	105/-
Blue pressed	... ..	per 1,000	250/-

† Price ex works, delivery extra.

*Limes and Sand*

		1-ton lots	6-ton lots
Lime, greystone	... ..	per ton	57/6
Lime, chalk	... ..	per ton	57/6
Lime, blue Lias (including paper bags)	... ..	per ton	67/-
Lime, hydrated (including paper bags)	... ..	per ton	67/-
Washed pit sand	... ..	per yard cube	12/-

(For cements, see "Concretor.")

Hire of jute sacks charged at 1/6 and credited at 1/6. If left, charged at 1/9.

*Sundries*

Wall ties, self coloured	... ..	per cwt.	—
Wall ties, galvanized	... ..	per cwt.	—
D.P.C. slates, size 18" × 9"	... ..	per 100	38/-
D.P.C. slates, size 14" × 9"	... ..	per 100	34/3
D.P.C. slates, size 14" × 4½"	... ..	per 100	15/-
†Ledkore D.P.C. Grade A	... ..	per foot super	6½d.
†Ledkore D.P.C. Grade B	... ..	per foot super	8½d.
†Ledkore D.P.C. Grade C	... ..	per foot super	10½d.

† Trade discount 5 per cent. and cash discount 5 per cent. Prices include delivery on minimum of £5 orders.

Earthenware airbricks :	9" × 3"	9" × 6"	9" × 9"	12" × 9"	14" × 9"
Red, blue, vitrified and buff terra cotta	each	-/11	1/10	3/4	8/8

Black cast iron, School Board pattern airbricks	9" × 3"	9" × 6"	9" × 9"	12" × 6"	12" × 9"
Galvanized ditto	per doz.	3/9	7/7	15/1	15/1
Black hit and miss cast iron ventilators	per doz.	7/7	15/1½	30/2½	30/2½

Galvanized ditto	per doz.	18/-	27/6	37/1	37/1
Buff terra cotta chimney pots	each	3/3	3/11	5/8	7/6
Fireclay	per ton	—	—	—	29/3

Wall reinforcement supplied in standard rolls containing 25 yards lin.					
*2" wide black japanned	per roll	2/5	2½"	3"	4"
*2" wide galvanized	per roll	—	2½"	3"	4"
*2½" wide black japanned	per roll	3/-	3"	4"	5"
*2½" wide galvanized	per roll	—	3"	4"	5"

\* Prices subject to 5% advance.

*Partitions*

		2"	2½"	3"	4"
Breeze	per yard super	2/2	2/7	3/2	3/10
Clay tiles	per yard super	2/8	2/11	3/6	3/10
Pumice	per yard super	3/6	4/3	5/-	5/6
Plaster	per yard super	3/1	3/11	5/-	5/9

*Gas Flue Blocks*

		Single Flues	Double Flues
Straight blocks	each	1/3	2/2
Building in set	per set of 3	2/11	5/4
Cover blocks	each	1/7	3/4
Raking blocks 45°	each	3/-	4/3
Raking blocks 60°	each	2/2	3/1
Offset blocks	each	3/8	5/4
Closer blocks	each	1/3	2/2
Closer flashing blocks	each	1/1	1/10
Straight flashing blocks	each	1/1	1/10
Terminal and cap	per set	7/5	12/8
Middle terminal and cap	per set	6/11	11/10
End terminal and cap	per set	7/2	12/5
Corbel block	each	5/4	3/6
Gathering block	each	—	10/8

**DRAINLAYER***Agricultural Pipes*

		2"	3"	4"	6"
Pipes in 12" lengths	per 1,000	72/6	102/6	140/-	250/-

(Delivered in full loads Central London Area.)

*Salt Glazed Stoneware Pipes and Fittings*

		4"	6"	9"
Pipes (2' lengths)	each	1/8	2/6	4/6
Bends, ordinary	each	2/6	3/9	6/9
Single Junction, 2' long	each	3/4	5/-	9/-
Yard Gully, without grating	each	6/3	6/10½	11/3
Ordinary round or square Grating, painted	each	-/7½	1/3	2/6
Ordinary round or square Grating, galvanized	each	1/0½	2/1	4/4½
Extra for Inlets, horizontal	each	1/6	1/6	1/6
Extra for Inlets, vertical	each	2/3	2/3	2/3
Intercepting Trap with Stanford Stopper	each	17/6	22/6	37/6
Grease and mud interceptor with bucket for removing silt and grease for 6", 9" and 12" drains, with iron grating, painted	each	20/-	21/10½	21/10½

The above prices to be varied by the following percentages for the different qualities given. All subject to 2½ per cent. cash discount.

	British Standard	British Standard Tested
Orders for 2 tons and over	Plus 2½%	Plus 27½%
Orders under 2 tons, 100 pieces upwards	Plus 20%	Plus 45%
Orders under 2 tons, less than 100 pieces	Plus 30%	Plus 55%

	Best	Seconds
Orders for 2 tons and over	Less 5%	Subject to 15%
Orders under 2 tons, 100 pieces upwards	Plus 12½% off the price of best quality for all sizes	
Orders under 2 tons, less than 100 pieces	Plus 22½%	

*Cast Iron Drain Pipes and Fittings*

Weight (per 9 ft.)	Size	9 ft.	6 ft.	4 ft.	3 ft.
1.1.8	4" per yard	7/7	8/5	13/1	10/-
1.1.20	4" per yard	7/11	8/7	13/4	10/4
2.0.6	6" per yard	11/5	13/5	21/5	17/2
4.0.2	9" per yard	21/-	26/9	45/6	35/-

*Tonnage Allowances :—*

Orders up to 2 tons nett.  
 Orders 2 to 4 tons less 2½%  
 Orders 4 tons or over less 5%

		4"	6"	9"
Bends	each	7/1	14/8	45/2
Single junctions	each	12/5	25/5	78/-
Intercepting traps	each	33/10	56/6	139/-
Gulleys ordinary trapped	each	16/5	—	—
Extra for inlet 4"	each	4/3	—	—
Grease Gully trap	each	128/7	—	—
H.M.O.W. large socket gully trap with 9" gully top and heavy grating and one back inlet	each	29/9	52/6	—

*Channels in Brown Glazed Ware*

		4"	6"	9"
Half round straight channels 24" long	each	1/3	1/10½	3/4½
Half round straight channels 30" long	each	—	—	4/2½
Ditto, short lengths	each	1/3	1/10½	—
Half round ordinary channel bends	each	1/10½	2/9½	5/0½
Ditto, short	each	1/10½	2/9½	—
Ditto, long	each	3/9	5/7½	10/1½
Three-quarter round branch bends	each	5/-	7/6	—

The above prices are subject to the same discounts as those given for "Best" quality salt glazed stoneware pipes.

*Manhole Covers, etc.*

		Black	Galvanized
24" × 18" single seal for foot traffic. (Weight 0.0.3 in lots of 24)	each	14/3	28/6
24" × 18" single seal for light car traffic. (Weight 2 cwt. in lots of 24)	each	40/6	81/-
24" × 18" Wood Block pattern. For road traffic. (Weight 3 cwt.)	each	Coated 67/6	—

**DRAINLAYER—(continued)***Manhole Covers, etc.—(continued)*

	Fine Cast	Galv.
Cast iron steps, 13½" long, 6" wide, 9" in wall, approximate weight 5½ lbs. each	per dozen 14/9	25/6
Galvanized fresh air inlets with cast brass fronts (L.C.C. pattern)	each 6/9	26/6

**MASON***Yorkstone*

Building quality Robin Hood and Woodkirk Blue Stone.	
Blocks scrapped, random sizes...	per foot cube 5/4½
Add for blocks to dimension sizes	per foot cube 7½d. (each dimension)

Templates with sawn beds, edges rough (up to 4 ft. super and not over 2' 6" long)	per foot cube 6/-
Templates with sawn beds, sawn one edge, per foot cube	7/2½
Templates with sawn beds, sawn two edges, per foot cube	8/4½
Prices f.o.r. Yorkshire, railway rate to London Station per ton. (Minimum 4-ton loads.)	29/1

*Artificial Stone*

6" x 3" Copings and sills	per foot run 1/10
6" x 6" Copings and sills	per foot run 2/10
9" x 3" Copings and sills	per foot run 2/2½
9" x 6" Copings and sills	per foot run 4/0½
12" x 3" Copings and sills	per foot run 2/10
12" x 6" Copings and sills	per foot run 4/7
Cornices according to detail, per foot cube (from)	8/3

**SLATER, TILER AND ROOFER***Best Bangor Slates*

	£	s.	d.
24" x 12" ...	per 1,000 actual	58	0 0
20" x 10" ...	per 1,000 actual	38	0 0

Prices include for delivery to site in lots of 1,000 and upwards.

*Tiles*

	£	s.	d.
Hand-made sandfaced 10½" x 6½" red roofing tiles	per 1,000	7	10 0
Machine-made sandfaced 10½" x 6½" red roofing tiles	per 1,000	6	10 0
Berkshire rustic pantiles...	per 1,000	35	0 0

*Asbestos-cement*

16" corrugated sheets, grey	per yard super	3/0½
Standard 3" corrugated sheets, grey	per yard super	2/9½
Slates ( <i>Manufacture temporarily suspended</i> ):—		
* 15½" x 7½" grey	per 1,000	£6 15 9
* 15½" x 15½" diagonal, grey	per 1,000	£13 11 6
* 15½" x 15½" diagonal, russet or brindled	per 1,000	£21 19 6
Pantiles ( <i>Manufacture temporarily suspended</i> ):		
* Large russet brown	per 1,000	—
* Prices are for minimum two-ton loads, and are subject to 6½% advance and 5% trade discount.		
† Do., but 3½% advance and 5% trade discount.		

**JOINER***Asbestos-cement and Asbestos Products*

½" Semi-compressed flat building sheets, grey	
½" Ditto ...	per yard super 1/3½
½" Ditto ...	per yard super 1/4
½" Ditto ...	per yard super 1/11

Prices are for orders of two tons and over and are subject to 10% advance and 5% trade discount.

½" Asbestos wallboard (in sheets 8' 0" x 4' 0")	per foot super	-/4½
½" Ditto ...	per foot super	-/3½
½" Asbestos wood (in sheets 8' 0" x 4' 0")	per yard super	2/4

The following asbestos prices are subject to 10 per cent. trade discount:—

Asbestos-cement stipple glazed sheets (in sheets 8' 0" x 4' 0" and 4' 0" x 4' 0")	per yard super	8/-
Ditto, plain white glazed sheets (in sheets 8' 0" x 4' 0" and 4' 0" x 4' 0")	per yard super	9/6
Marble glazed sheets (in sheets 8' 0" x 4' 0" and 4' 0" x 4' 0")	per yard super	8/-
½" Fibre Board	per foot super	-/8½

	25-75	150-300	600
	yards	yards	yards
½" Fireproof plaster board	per yard super 2/5	2/1	1/9
½" Ditto	per yard super 2/3	1/11	1/7
Joint tape (approx. 250 feet run)	per roll	—	1/6
Joint filler	per lb.	—	-/4

*Sundries*

Slates or sarking felt	per yard run	-/7½
Roofing felt	per yard run	-/10
Bituminous hair felt	per roll	—

All rolls 25 yards long by 32" wide.

**JOINER—(continued)***Sundries—(continued)*

Black waterproof paper, 5' wide	per yard run	—
Building paper in rolls of 100 yards, 1-ply, 60" wide (B.I. 120)	per yard run	—
"Cabots" Quilt:—(Ex Works) Twenty roll lots delivered carr. free.		
Double ply	per roll 60/-	per half-roll 38/-
All rolls 28 yards long by 36" wide. Special terms for quantities.		
Cut steel clasp nails	1" per cwt. 41/7	4" per cwt. 32/1
" floor brads 2"	32/1	3" " 30/9
Bright oval wire nails	1" " 45/10	4" " 33/1
Galvanized wire staples with slice cut points	1" x 12 gauge	per cwt. 52/-
Scotch glue		per cwt. —

**STEEL AND IRONWORKER***Steelwork*

£ s. d.

Basis price for rolled steel joists sections 5" x 3" to 16" x 6", in 10 ft. to 50 ft. lengths	per ton	15	10	6
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**PLASTERER***Plaster and Cement*

	1-ton loads
Sirapite (coarse)	per ton 88/6
" (fine)	per ton 87/6
Victorite No. 1	per ton 110/-
" No. 2 or non-sweat	per ton 105/-
Thistle (browning)	per ton 88/6
Thistle (haired)	per ton —
Pink plaster	per ton 83/6
White plaster	per ton 93/-
Keene's pink	per ton 138/-
Keene's white	per ton —
Super Carbo	per ton —
Carbo-setting	per ton —

1 ton upwards

	£	s.	d.
Cullamix No. 2 cream (rendering mixture)	per ton from	7	3 6
" No. 3 cream	"	7	3 6
Snowcrete mixture	"	6	18 6

*Sundries*

Sharp washed sand	per yard cube	13/9
Cow hair	per cwt.	46/-
Goat's hair	per cwt.	72/-
Expanded metal lathing, 9' 0" x 2' 0"		
½" mesh x 26 gauge	per sheet	2/9
Wire Slate nails (galvanized) 1½" x 15 gauge	per cwt.	67/7
" " (bright wire)	per cwt.	—

Less than 150 yds.    Less than 300 yds.    Over 300 yds.    Over 600 yds.

¾" Plaster board	per yard super	—
1½" Galvanized nails	per cwt.	—
Scrim cloth in 100-yard rolls	per roll	—

*Wall Tiles*

The following prices are subject to 50 per cent. addition: Commercial quality.

Ivory, white, etc., glazed 6" x 6" x ¾"	per yard super	10/1
Angle beads (1½" wide)	per yard run	1/2½
" " (1" " )	per yard run	-/10
Rounded edge tiles	per yard run	2/6½
Coloured enamelled bright glazed, 6" x 6" x ¾"	per yard super	14/3
Angle beads (1½" wide)	per yard run	1/4½
" " (1" " )	per yard run	-/11½
Rounded edge tiles	per yard run	2/7
Eggshell gloss enamelled, 6" x 6" x ¾"	per yard super	15/-
Angle beads (1½" wide)	per yard run	1/7½
" " (1" " )	per yard run	1/0½
Rounded edge tiles	per yard run	2/8½

Special rates for quantities

**PLUMBER***Lead*

3½ lbs. and upwards milled sheet lead in quantities of 5 cwt. and upwards	per cwt.	35/6
Add if cut to sizes	per cwt.	3/-
Lead ternary alloy, No. 2 quality extra over sheet lead	per cwt.	7/-
Allowance for old lead delivered to merchant	per cwt.	18/-





## REINFORCED CONCRETE FOR POST-WAR CONSTRUCTION PROGRAMMES



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## SCRAP METAL SWEEP

Lord Reith, Minister of Works, announced last week that his Ministry had undertaken at the request of the Minister of Supply the job of sweeping the country from end to end of steel and iron scrap, large and small.

The need for scrap recovery is urgent. It is hoped to get 40,000 tons a week from this national drive, to be handed over to Lord Beaverbrook for steel works. In addition to the normal supplies of scrap which arrive through scrap merchants, who will carry on their business as hitherto, Ministry of Works are starting an intensive drive.

The campaign will fall roughly under three heads:

- (a) a national survey of all idle iron and steel in lots of over three tons in any one place. This survey is being accelerated and it will be made compulsory to disclose all such metal;
  - (b) clearance of local dumps to which lots of less than three tons should be sent as quickly as possible;
  - (c) acceleration of the collection of railings.
4. Under (a), the national survey will be included disused pithead gear, bridges, rail tracks and factory machinery, as well as the large accumulations of loose scrap.

Under (b) will be taken the small quantities in yards of all sorts, from small builders and factories with no regular scheme of passing scrap back to the foundries, as well as the scrap turned out

by private householders and others. Local dumps will all be cleared, but each village must not think that its own dump will be cleared to-morrow. The dumps are going to be taken county by county, and it may be some months before the turn of any particular county comes along. What we want is a steady, regular flow to the foundries, and that can be secured only if each town and village starts to fill up its dumps *now*, ready for clearing when the foundry needs it. The Ministry asks that the mole hills should be turned into mountains of scrap and appeals to the leading men and women in town and village to see that everything is contributed to the war effort. The war machine must be fed.

Under (c) the collection of railings will be continued and accelerated. The Ministry asks for the help of all in this difficult task.

The Ministry will start county sweeps almost at once. Three counties will be tackled simultaneously—Essex, Wiltshire and Cumberland—all rural areas. This is short notice but by co-operation—especially over manual handling and the loan of transport—these counties can make their dumps worth taking. Every dump should be at least ten times as large as it is now. Every householder is asked to spring clean the house of all useless metal, from food tins to broken mangles and bicycles. Every garage should turn out its old plant, wheels, rusty nuts and bolts. Every farmer should clear his barns of old machinery.

Mr. G. M. Carter, of Messrs. George M. Carter Erectors, Ltd., of Newcastle, has been appointed Director of Demolition and Recovery and is in charge of all this work for the Minister of Works.

## WAR DAMAGE REPAIRS

War Damage Commission has decided that where the cost of work of making good war damage is being paid by instalments as the work proceeds, charges for professional fees (in accordance with the scale and conditions issued by the Commission) borne by the claimant may be accepted as part of an instalment claim, on the following basis:—

(a) In cases in which a firm contract is entered into for the whole of the work there will be admitted as part of the first instalment the actual fees already paid by the claimant up to an amount not exceeding two-thirds of the total estimated fee. The balance will normally be paid with the final instalment claim. In those special cases where the claim is a very large one, consideration will be given to the question of further advances on account of fees as part of intermediate instalments.

(b) Where the work proceeds on the footing of a prime cost contract, with no firm basis on which to estimate the total amount of fees allowable, the permitted instalment in respect of fees will not exceed the appropriate scale percentage on the cost of the work so far executed.

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